Coast Guard Aviation: service in transition

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When the U.S. Coast Guard transferred from the Department of Transportation to the Department of Homeland Security in 2003, the service took on the added responsibility of maritime homeland security. All Coast Guard air stations and aircraft types are supporting the portfolio of homeland security missions with patrols offshore and in the ports and waterways across the nation, while continuing to perform core missions such as search and rescue. Coast Guard Aviation strives to meet current and future taskings through a combination of ongoing maintenance and normal life-cycle improvements of existing assets; the addition of newer, more capable systems; and new practices and initiatives being implemented throughout the organization's multiple platforms.

HH-60J Jayhawk

The Coast Guard's operational fleet of 42 HH-60J Jayhawk medium-range recovery helicopters will soon undergo its first major upgrades since initial acceptance in 1990. Funds have been allocated for an avionics upgrade to begin in late FY 05 and end in FY 09 during the HH-60J's third post-depot maintenance (PDM) cycle. The new avionics suite and cockpit are based on the U.S. Army MH-60K special operations common avionics architecture system cockpit. Other improvements will include a new forward-looking infrared (FLIR) sensor and radar replacement. In addition, the aviation service life extension should extend the fleet to the year 2020.

HH-65 Dolphin

The HH-65A Dolphin fleet comprises 84 operational aircraft located at 17 air stations throughout the United States. It is a very versatile aviation asset that conducts essentially every mission for which the Coast Guard is responsible, from homeland security to polar operations.

The Dolphin's ongoing upgrades have converted the aircraft to full night-vision goggles cockpit operation, which includes hoisting, rescue swimmer operations and ship/helo operations. The HH-65Bs, with a new computer display unit, have been coming off the PDM line since March 2001 and are operating with rave reviews from the fleet. Fleetwide implementation should be completed by January 2005. Aviation Training Center Mobile, Ala., has updated the transition course syllabus and is now only producing HH-65B pilots for the fleet.

An initiative to re-engine the HH-65 is underway, which will resolve current safety and reliability issues and allow necessary operational restrictions to be lifted. New engines would enhance the Dolphin's power, providing improved range and endurance and bringing the helo back to its original short-range recovery requirements and beyond. Additional power would also enable the installation of FLIR, satellite communications and an improved radar system.

HU-25 Guardian

Rockwell Collins will begin installation of an upgraded avionics package on the fleet of HU-25 Guardians commencing this year. Currently, the HU-25 avionics system includes many single-vendor components, several of which are classified as obsolete and nonprocurable. The upgrade is a precursor to the system currently implemented in the HH-65 fleet by Rockwell Collins. It will include replacement of the navigation computer and flight data units and a horizontal situation indicator. The project will increase the HU-25's availability and may extend the aircraft's service life well beyond 2010.

HC-130H Hercules

Coast Guard HC-130H Hercules aircraft remain fully engaged worldwide in support of traditional Coast Guard missions, as well as new missions associated with homeland security. The Hercules fleet comprises 22 operational aircraft stationed at Elizabeth City, N.C.; Clearwater, Fla.; Sacramento, Calif.; Kodiak, Alaska; and Barbers Point, Hawaii. Modifications are ongoing to standardize the myriad cockpit configurations and to install a gearbox chip detector system and up-to-date avionics.

C-130J/HC-130J

On 31 October 2003, Lockheed Martin formally delivered the C-130J Super Hercules airlifter to the Coast Guard in a ceremony at the Coast Guard Support Center in Elizabeth City. The joint ceremony marked the formal delivery of the aircraft and the establishment of the C-130J Aircraft Project Office (APO) with its first commanding officer, Commander John Hardin. The APO in Elizabeth City will conduct initial aircrew and maintenance training and develop a support and operations concept for the aircraft. There are currently 44 people assigned to the APO and 21 more will arrive in summer 2004.

On 9 December 2003, the last of six C-130Js purchased was transferred to the Coast Guard. Initially, the C-130J fleet will be operated by the APO as baseline airlifters. These aircraft will provide support to the sensor-equipped HC-130H fleet by relieving them of airlift support missions and allowing operational commanders to use more of the HC-130H flight hours directly on law enforcement and homeland security patrols.

The Coast Guard is currently seeking the Department of Homeland Security's approval of long-range maritime patrol modifications for the C-130J, and intends to contract for the first modified HC-130J in FY 04. Additional funding is required for modification of five more aircraft.

Helicopter Rescue Swimmer Program

From a congressional mandate in 1984, to a group of five individuals in 1985, to more than 240 operational swimmers in 2003, the Coast Guard's Helicopter Rescue Swimmer Program has been constantly growing and improving. The program evolved from the Navy's rescue swimmer program and has become world renowned in its own right. In 1997, the Coast Guard opened its own school as the mission scope grew beyond the rescue of downed military aviators to include different scenarios dealing with the public. The Coast Guard intensified its training by offering personnel with field experience the chance to attend Advanced Rescue Swimmer School at Cape Disappointment, Wash. This additional training provides insight on heavy surf, sea cave, cliff and high-seas rescues. The school began classes in 1995 and is now a highly sought training opportunity by not only Coast Guard rescue swimmers, but also Navy, Air Force and international students.

Since 1985, Coast Guard helicopter rescue swimmers have saved more than 5,700 lives. No rescue swimmer has been lost during a rescue, although two have died as a result of aircraft crashes. This outstanding safety record can be attributed to high standards, quality training and the team concept within Coast Guard aircrews. As the need for rescue swimmers increases, the Coast Guard is looking at building a new aquatic training facility at Aviation Technical Training Center Elizabeth City. The current facility is more than 50 years old.

Airborne Use of Force

Airborne use of force (AUF) is expanding beyond its current application by Helicopter Interdiction Tactical Squadron Jacksonville, Fla., helicopters in counterdrug operations. In the near future, other platforms will be able to employ AUF in maritime homeland security roles.

Coast Guard Air Station (CGAS) Cape Cod, Mass., conducted AUF proof of concept exercises with four HH-60J Jayhawk helicopters modified with an airframe-mounted area-fire weapon, shoulder-mounted weapon, upgraded radios, upgraded FLIR, head-up display, cabin floor armor, and pilot and copilot seat armor. A core group of pilots and flight mechanics were trained in day and night tactics and aerial gunnery. Lessons learned from this initiative may serve as a blueprint for arming other HH-60J and HH-65 units. Coast Guard Headquarters' Office of Aviation Forces is seeking funding to eventually employ AUF operationally at CGAS Cape Cod, and build the capability at other air stations across the nation.

In addition, training in vertical insertion (fast roping) from HH-60Js is almost completed. Vertical insertion provides the capability to rapidly deliver boarding teams to a vessel when environmental conditions or noncooperation from the boarded vessel make waterborne delivery impractical. Air stations with HH-60J helicopters are developing partnerships with their local Coast Guard Tactical Law Enforcement Teams and Maritime Safety and Security Teams to develop this capability. In January 2003, both HH-60J Jayhawks and HH-65 Dolphins were certified by the Naval Air Systems Command to fire the M-240 machine gun.